

The New York State Office for Technology (NYS-OFT) hereby submits the following reply comments in response to the Commission's *Notice of Inquiry*, FCC 02-328 (released December 20, 2002) ("*Notice*") in the above-captioned proceeding. NYS-OFT supports the initial comments of parties who objected to the introduction of unlicensed devices into radio frequency bands used by public safety and other land mobile radio users.

The New York State Office for Technology, on behalf of the State of New York, is in the process of procuring a new Statewide Wireless Network (SWN) for State, Federal and Local Governmental entities that operate within New York State's geographic borders. SWN will provide an integrated mobile radio communications network that will be utilized by both Public Safety and Public Service agencies in New York State. It will have a digital, trunked architecture with both voice and data capabilities, and will be used in day-to-day operations, as well as for disaster and emergency situations, to more effectively and efficiently coordinate the deployment of all levels of government resources to such incidents. It will also enhance international coordination along the US/Canadian border, and play a critical role in supporting the homeland defense efforts within the State of New York.

The Commission is seeking information as to the viability of authorizing unlicensed devices within the TV broadcast spectrum. This matter is of grave concern to New York State and other Public Safety and Homeland Security stakeholders, as portions of the TV broadcast spectrum have also been allocated for Public Safety and other critical land mobile radio communications systems. The 470-512 MHz band (TV channels 14-

20) has long been shared between broadcasting and land mobile communication in eleven major metropolitan areas.¹ Many of the nation's largest police, fire, and EMS agencies operate their principal radio communications systems in this band.² In the New York City metropolitan area, channels 14 and 15 are allocated for land mobile use (much of which is licensed to Public Safety agencies), and waivers have been granted to authorize use of channels 16 and 19 specifically for Public Safety operations.³

The 764-776/794-806 MHz band (TV channels 63, 64, 68 and 69) has also been reallocated for Public Safety radio communications, as required by the Balanced Budget Act of 1997.⁴ This new Public Safety frequency band will greatly improve Public Safety communications capabilities across the nation, and provide for enhanced interoperability between Public Safety agencies. The State of New York has applied for and has been granted, a statewide license to operate in this Public Safety frequency band as an integral component of its SWN.⁵

In the past, the Commission has wisely excluded unlicensed devices from frequency bands used for the protection of life, health, and property, *see Notice* at n.9, recognizing that the danger of interference to police, fire, EMS and other Public Safety systems is simply too great. Preventing interference to Public Safety systems before it

¹ *See* 47 C.F.R. §90.303.

² *See, e.g.,* Comments of City and County of San Francisco, Comments of Los Angeles County, Comments of APCO, Comments of the Port Authority of New York and New Jersey.

³ *New York Metropolitan Area Public Safety Agencies*, 10 FCC Rcd 4466 (1995); Nassau County Police Department, *Memorandum Opinion and Order*, FCC 02-1771(released July 23, 2002).

⁴ *Report and Order in ET Docket No. 97-157*, 12 FCC Rcd 22953 (1997).

⁵ The State's ability to use the new spectrum is limited in many portions of New York by ongoing analog TV operations and Canadian television allotments.

occurs has always been, and must continue to be a priority for the Commission.⁶

Interference from unlicensed operations poses a special threat to Public Safety, not only because the interference may be hard to prevent, but also because it is difficult, if not impossible, to trace the source of interference once it occurs. There is no license database to identify the user, operating parameters, or location of the interfering device. That is an intolerable situation when the interference at stake has the very real potential to disrupt vital Public Safety communications.

The Commission suggests in the *Notice*, at ¶13, that technological developments may allow for more extensive frequency sharing with unlicensed devices than has been afforded previously. However, these developments are unlikely to be sufficient to prevent life-threatening interference to Public Safety communications systems. For example, the Commission refers to technology that would allow equipment to “monitor the spectrum to detect frequencies already in use and ensure that transmissions only occur on open frequencies.” Yet, such technology assumes that protected operations use the relevant frequencies on a constant basis, and thus can be “heard” at any time. That might be the case with broadcasting and other services transmitting continuous carriers, but Public Safety and most other land mobile communications is an intermittent, on demand, type of use. A frequency may appear to be unused, only to be “keyed up” for a critical emergency communication in the next second. While technologies *might*⁷ someday be

⁶ See *Improving Public Safety Communications in the 800 MHz Band, Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*, Notice of Proposed Rulemaking, 17 FCC Rcd 4873 (2002).

⁷ Much of the problem lies within the inability of the unlicensed transmitter to accurately determine the actual interference that it is causing to other services. See “A White Paper on The Exploitation of Spectrum Holes”, Motorola, October 28, 2002, filed under Docket 02-135.

able to distinguish between unused and “quiet” channels, such technology does not currently exist, and should not be allowed on Public Safety or other land mobile frequency bands until it has been proven effective.⁸

Public Safety use of the 470-512 MHz band is currently limited to specific geographic areas. However, interference with these systems cannot be averted simply by prohibiting unlicensed 470-512 MHz operations in those particular areas. The FCC will have no ability to control the physical location of an unlicensed device, and cannot prevent an owner of such device from intentionally or unintentionally moving that device to a metropolitan area where it could interfere with critical Public Safety radio communications. In the *Notice*, the Commission suggests that GPS technology could enable an unlicensed device to “know” where it is, and thus use a frequency database to avoid interference. First, GPS technology requires line-of-sight communication with a satellite, and thus would be of limited value for devices used indoors. Second, and in any event, this too is a nascent technology and must not be relied upon to prevent interference to Public Safety communications systems unless and until it is proven in the field.

The Commission further inquires as to whether there are channel and geographic restrictions, separation distances and *D/U* ratios, or other technical requirements that would allow sharing of the television spectrum with unlicensed devices. With regards to Public Safety, there is a simple answer to all of these questions - the *only* way to protect Public Safety from interference caused by such operations is *not* to allow operations on

⁸ See also Comments of Land Mobile Communications Council, Comments of AMTA, Comments of Motorola.

any frequency that is utilized by Public Safety *anywhere* within the United States.

Otherwise Public Safety could never be guaranteed that their operations would not suffer interference from these unlicensed and nearly untraceable transmitters.

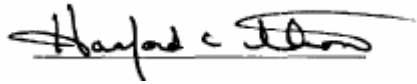
Because of these concerns, New York State fully supports the comments of the Association of Public Safety Communications Officials (APCO), the New York/New Jersey Port Authority, Los Angeles County, the Land Mobile Communications Council (LMCC), the American Mobile Telecommunications Association (AMTA), and Motorola with regard to the exclusion of unlicensed services within any Public Safety or Land Mobile Radio allocation. Furthermore, based upon the comments of LMCC and AMTA, we also ask that the Commission consider the further sharing of Broadcast spectrum with Land Mobile Radio operations. This step by the Commission would represent continued progress toward meeting the wide area operational spectrum needs of Public Safety below 1 GHz.

CONCLUSION

The State of New York has an awesome responsibility to protect the life and property of its 18 million residents. Public Safety communications has become one of the most critical tools for achieving this objective. Thus, interference to Public Safety communications can have serious and large-scale consequences. Although the Commission may be able to integrate unlicensed operations into unused spectrum currently allocated and used only for television, it must not try to do the same with spectrum that is used by Public Safety. The only way to protect Public Safety from

interference caused by such unlicensed operations is not to allow unlicensed devices on *any* frequency that is utilized by Public Safety *anywhere* within the United States.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Hanford C. Thomas", with a horizontal line drawn underneath the name.

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